Remarks

Regarding Section 4 of the official action, Claims 1, 7,12-15, 17, 19, 24, and 30- 33 are rejected under 35 USD 103 (a) as being unpatentable over Cao in view of Danagher. We traverse this rejection as follows:

For the Examiner to establish a prima facie case of obviousness, three criteria must be considered: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all of the claim limitations. MPEP §§ 706.02(j), 2142 (8th ed.).

We respectfully submit that the examiner has failed to establish a prima facie case of obviousness for claim 1, at least on the basis of the 3rd criteria as set out above.

Specifically, the rejection fails to establish how either reference, even if they can be combined for obviousness (which is not admitted but denied), teaches at least the following limitation of claim 1:

> performing at least one of chromatic dispersion compensation, slope of dispersion compensation and amplitude compensation wherein for each one of the N optical systems, a respective at least one of chromatic dispersion, slope of dispersion and amplitude of the output WDM optical signal ***is independent of the add/drop function*** and corresponds to a target value. (emphasis added).

The rejection states CAO teaches something similar, relying on Fig 3B and col 4, lines 19-39. However CAO does not teach performing chromatic dispersion compensation and amplitude compensation wherein a respective at least one of chromatic dispersion and amplitude of the output WDM optical signal ***is independent of the add/drop function*** and corresponds to a target value, as alleged in the rejection.

The system taught in CAO does not have the ability to provide dispersion and slope compensation independently of the add/drop function. Cao only teaches the DCMs within

ADD/DROP module 10 (as shown in Fig 3B) and not within the programmable switch matrix module 30 (as shown in Fig. 5 and described in columns 5-6). In contrast, in the embodiment shown in our Fig 1, we teach an integrated OADM including the Add/Drop function, the DCM function and the switches 121-128. This independence is not taught by CAO as alleged, and is a differentiating feature of our invention, which allows one to choose differing compensation schemes for each switch position, each corresponding to a different function.

Similarly for claim 12 (and dependent claim 15), the examiner's allegation that CAO teaches performing amplitude compensation such that the power corresponds to target values which are suitable for transmission requirements … and ***independent of the add/drop function*** is incorrect. This is not taught by CAO, as the variable attenuators are once again only within the ADD/DROP module 10, and are thus not ***independent of the add/drop function*** as claimed.

Furthermore, we respectfully submit that the rejection fails to establish a prima facie case of obviousness based on criteria 1, as set out above.

For the Patent Office to combine references in an obviousness analysis, the Patent Office must do two things. First, the Patent Office must articulate a motivation to combine the references, and second, the Patent Office must support the articulated motivation with actual evidence. *In re Dembiczak*, 175 F.3d 994,999 (Fed. Cir. 1999). While the range of sources for the motivation is broad, the range of available sources does not diminish the requirement for actual evidence. *Id.*

The examiner admits that CAO does not disclose a solution for "each of N optical systems" as claimed, and then alleges on page 4 of the rejection that "It would have been obvious to a person of ordinary skill in the art to include more than one input and output WDM signal (and more than one optical system) as taught by Danagher et all in the method disclosed by CAO in order to process greater amounts of data on multiple incoming and outgoing fibers/optical systems in a large optical network."

However, this is a mere assertion based on hindsight and does not demonstrate a motivation or suggestion to combine the cited references. The examiner has failed to demonstrate

where or how such a motivation can be found. We certainly do not see it within the CAO reference.

In order to prevent hindsight analysis, there must be some motivation or suggestion to combine specific prior art in such a way as to arrive to the combination claimed in the patent at issue. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." In re Mills 916 F.2d at 682, 16 USPQ2d at 1432; In re Fitch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). See also, e.g., Yamanouchi Pharmaceutical Co., Ltd. v. Danbury Pharmacal, Inc., 231 F.3d 1339, 1343 (Fed. Cir. 2000): "*the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test of obviousness.*", and Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d at 1371-1372 (Fed. Cir. 2000), "*Combining prior art references without evidence or a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.*"

Accordingly, applicants respectfully contend that the examiner has failed to establish a prima facie case of obviousness as the examiner has not met the burden of articulating a motivation to combine the references. We respectfully submit that merely stating "in order to process greater amounts of data on multiple incoming and outgoing fibers/optical systems in a large optical network" does not articulate a motivation to combine these particular references. In any event the rejection fails to support an articulated motivation with actual evidence.

Similar arguments apply to the remainder of the claims. Without limiting the generality of the foregoing we point out that the rejection to claims 8-11, 25 -27 and 29 is even more erroneous. On page 15 of the rejection the examiner states:

> Cao in view of Danagher et al. and Suzuki et al. also does not specifically disclose or suggest that the input WDM optical signals are set to have common values of chromatic dispersion and slope of dispersion, but it would be well understood in the

> art that the optimal target values of chromatic dispersion and slope of dispersion may be the same for the WDM optical signals. Further regarding claims 8 and 25, it would have been obvious to a person of ordinary skill in the art to have common values of chromatic dispersion and slope of dispersion in the method described by Cao in view of Danagher et a. and Suzuki et al. in order to more conveniently provide the compensation (since each signal would not have to be adjusted to a different target value).

We respectfully submit that this is a mere unsupported assertion with no basis directed at a claimed feature that the examiner admits is not taught, even after combining 3 references. This is the essence of piecing together different prior art references based on hindsight, and is not allowed.

Furthermore we submit that a person skilled in the art would not combine Suzuki with Cao and Danagher. Suzuki is directed to return to zero optical pulses (Solitons) for long reaches and not conventional WDM systems using OADMs as taught by CAO. A person ordinarily skilled in the art would have no reason to use the teachings of Suzuki let alone believe that they would be applicable to the field of this invention.

Accordingly we respectfully submit that the OA fails to establish a prima facie case of obviousness for any of the claims. Accordingly, all of the remaining claims are now in allowable form, and withdrawal of the rejections and allowance of the application is requested.

The Commissioner is hereby authorized to debit $120.00 from Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP, representing the fees for a one month extension of time.

The Commissioner is hereby authorized to charge any additional fees, and credit any over payments to Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP.

Respectfully submitted,

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